DOCUMENT RESUME

ED 225 664 PS 013 313

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TITLE Who Gets More Attention When an Adult Plays with Two 7-Month-Old Infants?
PUB DATE Apr 82
NOTE 15p.; Paper presented at the Annual Meeting of the Eastern Psychological Association (Baltimore, MD, April 15-18, 1982).
PUB TYPE Speeches/Conference Papers (150) -- Reports - Research/Technical (143)

EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS *Attention; Bias; Child Caregivers; Day Care; *Females; *Individual Differences; *Infant Behavior; *Infants; *Interpersonal Attraction; Undergraduate Students
IDENTIFIERS Multiple Measures Approach; *Physical Attractiveness

ABSTRACT

Focusing on infants' physical attractiveness and behavior, this study explores reasons some infants receive greater amounts and different types of attention from adults than do others. Subjects were observed in 21 groups of three, consisting of one adult and two same-sex infants. Adult subjects were unmarried, childless undergraduate women interested in child care careers. Infant pairs brought to and left in a laboratory playroom were joined by an adult subject instructed to sit on the floor and play with the infants as she might if they were under her care. Recorded on videotape, the first 9 minutes of each play session were coded and analyzed for infant vocalization, infant activity, and adult touching and holding of the infants. Additionally, three assistants recorded the looking and smiling behaviors of each subject. Adult subjects completed a questionnaire concerning their perceptions of each infant, mothers completed a demographic questionnaire, and infants were photographed. Photographs were rated by two groups of college students, one group selecting which of two infants was "cuter," another rating each photograph separately on a nine-point scale of cuteness. In general, results indicate that infant behaviors (i.e., fussing, crying, smiling) are more salient than cuteness in eliciting adults' attention, although it is likely that adults' perceptions of cuteness influence their perceptions of behaviors. (RH)

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Who gets more attention when an adult plays with two 7-month-old infants?

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This paper was presented at the meetings of the Eastern Psychological Association in Baltimore, April 1982.

PS013313

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Who gets more attention when an adult plays with two 7-month-old infants?

Much attention has been paid in recent years to the effects of group care on infants and young children. This concern reflects the observation that increasing numbers of infants are spending a portion of their time in a group care environment such as a day care center or family day care home. Despite widely held fears about potential detrimental effects of such nonmaternal care, most studies have shown that infants are rarely affected adversely and may at times be benefited by group care (Belsky & Steinberg, 1978).

Less attention has been paid to individual differences in the influence of group care on infants' adjustment and development. In a typical group program, adult caregivers must continually distribute their attention among two or more infants. Despite their intentions, it is unlikely that their attention is distributed equally among the infants present. If the effects of group care on infants are mediated through their interactions with adult caregivers, we might expect different effects on infants who receive more or less attention, or different types of attention, from these caregivers. The present study was designed to explore some of the reasons why some infants might get different amounts or types of attention. If particular characteristics and behaviors of infants can be identified as elicitors of adult attention in such choice situations, we might be able eventually to predict or change the effects of group care on individual infants.

A laboratory setting was chosen for this study so that some of the possible influences on a caregiver's distribution of attention could be controlled. For example, an infant's age and behavioral characteristics associated with age elicit different adult responses (Korner, 1974; Osofsky & Connors, 1979; Sander, 1962). Ample evidence also exists that male and female infants are treated differently, even when sex differences in infants' actual behavior are discounted (Condry & Condry, 1976; Will, Self, & Datan, 1976). In the present study, sex and age were controlled by asking adults to play with two same-sex 7-month-old infants. Possible elicitors of differential attention which were examined were the infants' physical attractiveness and behaviors occurring during the play session.

Physical attractiveness effects were chosen for study for a number of reasons. Physical attractiveness is well established as a variable which influences interpersonal attitudes and behavior among adults and children (Adams, 1977; Berscheid & Walster, 1974; Hildebrandt, 1982). More attractive persons are generally both perceived and treated preferentially. Studies by Hildebrandt and Fitzgerald (1978, 1981) of adults' reactions to photographs of infants varying in cuteness suggests that this differential treatment may begin very early. When photographs were shown in pairs, or when they were shown singly and subjects were allowed to control the length of presentation, it was found that adults looked longer at infants they perceived to be cuter. If this selectivity generalizes, it was expected that the more attractive infants would receive more attention in the present study. Nevertheless, live infants differ from one another in more than just their physical attractiveness. It was also expected that certain behaviors emitted by the infants would elicit attention from the adult.

Method

Subjects

Subjects were observed in 21 groups of three: one adult with two same-sex infants. The adult subjects were college undergraduate women who expressed an interest in pursuing careers with infants or young children. Their average age was 21 years with a range from 18 to 29 years. All were unmarried and childless. These women were selected since they represent one type of adult who is likely to work in infant group care programs.

The infant subjects were recruited from the community. Most were first born; 20 were male and 22 were female. No attempt was made to match the infants on any characteristics other than age and sex.

Procedure

The infants' mothers brought them to a laboratory playroom containing age appropriate toys. Once they seemed comfortable, their mothers moved to an adjoining room and the adult subject was brought to the playroom. She was instructed to sit on the floor and play with the infants as she might were they under her care.

Each play session lasted about 10 minutes. Only the first 9 minutes were coded and analyzed. The interactions were recorded on videotapes which were later coded for infant vocalization, infant activity, and adult touching and holding of the infants. In addition, three research assistants recorded looking and smiling of each subject by watching through one-way mirrors surrounding the play area. After the play session, the adult subjects completed a questionnaire concerning their

perceptions of each infant, each mother completed a demographic questionnaire, and each infant was photographed. Photographs were usable for 16 of the 21 pairs of infants.

The photographs were rated by two separate groups of college students. One group of 115 students saw the photographs in pairs and selected which of the two infants was cuter. Another group of 19 students rated each photograph separately on a 9-point scale of cuteness. Interrater reliability in this group was high, as indexed by a Chronbach's alpha of .90.

Results

In general, the play interactions went quite smoothly. Only two adults reported being a little uncomfortable during the session. Only 7 of the 42 babies cried at all and an additional 5 fussed. All but 6 of the babies smiled at least once, and all but 8 vocalized. All the babies looked at the adult at least once. Several of these behaviors were interrelated, as shown in Table 1. Infants who smiled more frequently also looked longer at the adult and fussed and cried more frequently.

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Insert Table 1 about here

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Most of the adult subjects vocalized frequently to both babies, and since it was difficult to determine to which baby a vocalization was directed, this behavior was not analyzed. All the adults smiled at least once, although they did not smile at all at 6 of the babies.

The adults touched 30 babies, supported 14 babies (some of these 7-month-olds had only recently begun to sit and either had to be placed on the floor lying down or supported by the adult), moved 20 babies, and held 20 babies. The adult behaviors considered in the present analyses are listed in Table 2. You should note that adult looking and smiling were positively correlated. The longer an adult looked at a particular infant, the more frequently she smiled at that infant.

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Insert Table 2 about here

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To assess the relationship between adult attention and infant characteristics, two sets of analyses were conducted. In the first, each of the 42 infants was considered to be an independent subject, without regard for the characteristics of the other infant in the pair. Correlations among infant physical attractiveness (as rated by the students who saw each photograph individually), infant behaviors, and adult behaviors are shown in Table 3. As you can see, adults smiled more frequently at infants who were rated cuter. Interpretation of this finding is complicated by the finding that cuter babies smiled more themselves, and adult and infant smiling were correlated. It seemed possible that infants who had a propensity to smile more had smiled when their photograph was taken and thus had been rated cuter. Indeed, 5 of the 32 infants who were photographed were clearly smiling. However, these infants did not show significantly higher cuteness ratings. Nonetheless, the correlations among infant and adult smiling and cuteness

ratings were recalculated eliminating those infants who smiled while being photographed. All three correlations increased in magnitude. It appears that more adult and infant smiling occurs during social interaction when the infant is more physically attractive. It is as yet unclear whether cuter infants have learned to smile more, which produces more smiling in adults, or whether adults smile more at cuter infants, which causes the infants to smile more in return.

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Insert Table 3 about here

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Several additional relationships between adult and infant behaviors are evident from Table 3. Adults looked more at babies who vocalized and fussed more; they touched babies more who vocalized and looked at them more; and they held babies more who fussed or cried. Again, these correlations do not tell us the direction of causation. Further study is needed to confirm our intuitions about which infant behaviors serve primarily as elicitors of adult behaviors, and which serve primarily as responses to adult behaviors.

The second set of analyses was conducted to determine if differences between the two infants in each pair who interacted with each adult were related to differences in the behaviors the adult directed to them. Since the two infants each adult subject interacted with were not selected so as to be maximally different in cuteness, some of the adults interacted with two infants who were similar in cuteness, and others interacted with infants who differed in cuteness. It was therefore

expected that there would be little difference in behavior directed to the two infants when they were similar in cuteness, and a greater difference in behavior in those cases where the infants differed more in cuteness. To test this hypothesis, the measure of relative cuteness of the infants in each pair was used to calculate the difference in cuteness between them. In addition, the differences between the two infants in their behaviors and adult behaviors directed to them were calculated. The correlations between these cuteness differences and behavior differences were calculated and are reported in Table 4. The major finding was that adults demonstrate greater differences in looking at the two babies when the two babies differ more in cuteness, with more looking at the cuter baby.

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Insert Table 4 about here

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Although this finding confirms the hypothesis that cuter babies will be looked at more when there is a choice between two infants, further examination of the data revealed a confounding influence of infant fussing. The greatest differences in adult looking occurred when one of the infants fussed. Three of the four cuter infants who were maximally different in cuteness from the infant they were paired with both fussed and were looked at longer. The correlation between cuteness differences and looking differences was recalculated after removing the four pairs in which either infant fussed more than once, and was found to be only .26. Thus, it appears that there is only a small, and not statistically significant, relationship between infant cuteness and adult looking.

Discussion

Looking at the general pattern of results from this study, it appears that some infants are more affectively active than others during social interaction with an adult. Babies who smile more than other babies also look, fuss, and cry more. It also appears that the more active babies elicit more attention, as measured by looking, from an adult. Babies who show more negative affect by fussing and crying are likely to be attended to by being held. Reciprocal smiling seems to be more likely with infants who are objectively rated cuter.

These findings support the idea that an adult's attention will be unevenly divided when she must distribute her attention between two infants. Although these data were not analyzed in a way that would clarify causal relationships, a general model of caregiver attention distribution can be proposed for further study. When a caregiver is first faced with a choice between two infants, she probably attempts to distribute her attention evenly. No infants in this study were completely ignored; all the caregivers attempted to interact with both infants. At this stage, physical attractiveness is likely to have a subtle influence on attention distribution, before other information about the infant is available. Adults may be attracted to the cuter of the two infants. As the adult interacts with the two infants, however, she may discover that one of the infants is more socially active and responsive than the other. Some of this difference may be inherent in the infants, some of it may be a result of the adult eliciting more social behavior from one infant than the other. Since infant social behaviors are rewarding to

an adult, she will likely continue to try to elicit these behaviors, especially from the infant she has discovered to be more likely to emit them. If one of the infants shows negative behaviors, she will try to reduce them by holding and comforting the infant. Infant physical attractiveness may continue to influence caregiver behavior, but probably in a less strong and obvious way than occurred initially. Infant behaviors are more salient than cuteness, although it is likely that perceptions of cuteness influence perceptions of behaviors.

A recently completed study confirms that infant physical attractiveness has its greatest effects early in a caregiver-infant relationship (Hildebrandt & Cannan, in prep.). New caregivers in a half-day enrichment program for infants and toddlers were observed to pay more attention to children who were independently rated cuter. However, experienced caregivers attended to children on the basis of their personalities and behaviors, and after several months, the new caregivers did too.

Both of these studies show that caregivers attend more to some infants than others, and suggest that certain characteristics and behaviors of infants can elicit more attention from caregivers. Several issues mandate further study. As mentioned before, additional work is needed to determine which infant behaviors elicit adult attention and which are reactions to it. Even more importantly, we need to assess the influence of differential amounts and types of caregiver attention on individual infants' reactions to group care and their subsequent developmental course.

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Table 1

Correlations among behaviors of individual infants

	Smile	Vocalize	Fuss	Cry
Look at adult Total	.45**	.01	.31**	.08
Smile Frequency	--	.23	.40**	.41**
Vocalize Frequency		--	-.01	-.06
Fuss Frequency			--	.49**
Cry Frequency				--

Table 2

Correlations among adult behaviors directed to individual infants

	Smile	Touch	Hold
Look at infant Total	.46**	.05	.13
Smile at infant Frequency	--	.11	-.11
Touch infant Frequency		--	-.19
Hold infant Total			--

*$p < .05$, one-tailed test
**$p < .05$, two-tailed test

Table 3

Correlations among infant cuteness,

adult behaviors, and infant behaviors

Infant behaviors	Adult behaviors: Look	Smile	Touch	Hold	Cuteness Rating
Look	.20	.16	.26*	.15	.05
Smile	.25	.28*	.19	.10	.45*
Vocalize	.30**	.04	.31**	.14	.09
Fuss	.59**	.17	-.12	.40**	-.13
Cry	-.02	-.16	-.10	.53**	-.05
Cuteness rating	.13	.38**	.17	-.21	

Table 4

Correlations between relative infant cuteness

and differences in behaviors

	Adult behaviors: Look	Smile	Touch	Hold
Percent of sample choosing cuter infant in each pair	.50**	.29	-.08	-.12

	Infant behaviors: Look	Smile	Vocalize	Fuss	Cry
Percent of sample choosing cuter infant in each pair	.22	.12	.09	.42	.01

*$p < .05$, one-tailed test
**$p < .05$, two-tailed test